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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,178	09/15/2003	Ray G. Sadler	10001445-4	1351

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EXAMINER

KAPLAN, HAL IRA

ART UNIT PAPER NUMBER

2836

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,178

Applicant(s)

SADLER ET AL.

Examiner

Hal I. Kaplan

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003 and 13 September 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 17-25 and 28-32 is/are rejected.
7) ☒ Claim(s) 26 and 27 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 15 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/22/03.
4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 20061013.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Paragraph 23, line 3 contains the phrase "connections for L1, L2, L3, G, 1, 2, 3, 4, 5, 6, and G". It appears this should be "connections for L1, L2, L3, G, 0, 1, 2, 3, 4, 5, and N".

Appropriate correction is required.

Drawings

2. The drawings are objected to because of the following informalities: In Figures 4B and 5B, it appears that the slots labeled 1-6 should be labeled 0-5. This causes the drawings to be unclear. See Specification, paragraph 22. Paragraph 22, lines 10-11 state that slots 2 and 3 of the BPS are a pair formed from L2 and N, but Figure 5B shows no connection between slots 2 and 3 and N. Paragraph 22, line 11 states that BPS slots 4 and 5 are a pair formed from L3 and N, but Figure 5B shows no connections between 4 and L3, and between 5 and N. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement

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sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 18, 23, and 26-28 are objected to because of the following informalities: Claim 18, line 5 contains the phrase "power factor correction". It appears this should be "power factor correction circuit". Claim 23 line 2, the phrase "said control logic" lacks proper antecedent basis. Claim 26, line 6 states that the "isolation diode hot swaps" between the first converter chain and the second converter chain. Claim 27 states that "hot swapping ... occurs instantaneously". This is not correct terminology. "Hot swapping" means physically removing and replacing a failed device with another device, and can only be performed by a user. Hot swapping is thus not instantaneous. The isolation diode may be necessary to enable the converter chains to be hot swapped, but the diode does not itself perform the hot swapping. Claim 28 line 8, the phrase "said corrected DC power" lacks proper antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 17-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 17 recites the limitation "said converters" in line 6. There is insufficient antecedent basis for this limitation in the claim. It is not clear what converters are being referred to. Claims 18-25 inherit this deficiency.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 28, 29, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over the US patent of Takeuchi (6,580,251) in view of the US patents of Gegner (5,404,092) and Philips et al. (6,845,023).

As to claim 28, Takeuchi, drawn to a power charging device using multiple energy sources, discloses a method of providing a supply power output comprising: receiving first and second AC inputs (12) from respective first and second AC input lines (see column 3, lines 20-30 and Figure 1); converting the first and second AC inputs (12) into DC power (14) (see column 3, lines 31-32); sending the DC power (14) to at least two converters (36), wherein the at least two converters (36) are designated to receive DC power of differing voltage levels (see column 3, line 59 - column 4, line 12; column 3, lines 20-30 indicate that the input AC voltages and thus the DC voltages are different); transmitting outputs of the at least two converters (36) to at least one isolation diode (see Figure 1); and receiving an output (42) (see column 4, lines 10-12). Takeuchi does not disclose adjusting the DC power; transmitting outputs of the at least two converters to an output filter; or receiving an output from an output filter.

Gegner, drawn to a high power factor AC-DC converter with reactive shunt regulation, discloses a similar method, comprising adjusting the DC power to ensure that the DC power has at least a predetermined value for a power factor (503) (see column 4, lines 56-65 and Figure 5). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to adjust the DC power output from the rectifier of Takeuchi, in order to allow the output voltage, current, or power to be maintained independent of variations in the load. Gegner also does not disclose an output filter.

Philips, drawn to a universal adapter with interchangeable plugs, discloses transmitting the output of a DC-DC converter to an output filter (322), and receiving an output (324) from the output filter (322) (see column 4, lines 50-55 and Figure 12). It

would have been obvious to one of ordinary skill in the art, at the time of the invention, to transmit the output of Takeuchi in view of Gegner to an output filter, in order to block noise interference from the output voltage signal.

As to claim 29, Gegner discloses suppressing harmonic signals (501) from reflecting back to the AC input lines (see column 8, lines 6-7).

As to claim 32, Takeuchi in view of Gegner and Philips do not disclose the 0.98 power factor value; however, selections of values of operational levels for an electronic device are engineering decisions based upon the system's intended use and the expected requirements of the systems with which it will interface. See MPEP §2144.04 IV (A).

In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

10. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi in view of Gegner and Philips as applied to claim 28 above, and further in view of the US patent of Pendleton et al. (6,862,644).

As to claim 30, Takeuchi in view of Gegner and Philips disclose all of the claimed features, as set forth above, except for a chassis. Pendleton, drawn to a backplane architecture for a telecommunications system chassis, discloses providing power (21)

back to a chassis (10) for distribution to components of a user system (see column 3, lines 4-7). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to provide the output power from the system of Takeuchi in view of Gegner and Philips back to a chassis for distribution to other components of the user system, as per the teaching of Pendleton, because it is more efficient for multiple components to be connected to a common chassis/backplane.

11. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi in view of Gegner and Philips as applied to claim 28 above, and further in view of the US patent of Stewart et al. (6,894,439).

As to claim 31, Takeuchi in view of Gegner and Philips disclose all of the claimed features, as set forth above, except for sending and receiving status information between a power monitor and the user system. Stewart, drawn to a portable power converter pack, discloses sending and receiving status information between a power monitor (45) and a user system (portable power converter) via a connector (46) (see column 9, lines 30-45 and Figure 8). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to send and receive status information between a power monitor and the user system of Takeuchi in view of Gegner and Philips, in order to avoid damage to the user system due to an overtemperature or undertemperature condition, or insufficient power supply.

Allowable Subject Matter

12. Claims 26 and 27 are objected to as set forth above, but would be allowable if rewritten to overcome the objections.

13. The following is a statement of reasons for the indication of allowable subject matter:

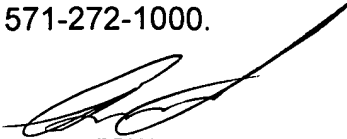
Claims 26 and 27 contain allowable subject matter because none of the prior art of record discloses or suggests hot swapping between two converter chains upon failure of one of the converter chains, wherein an isolation diode is necessary to enable hot swapping, in combination with the remaining claimed features.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal I. Kaplan whose telephone number is 571-272-8587. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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